

The Irregularity of a Spider's Feeding.

BY I. H. BURKILL.

One afternoon in 1908 my attention was drawn to an iridescent green hunting spider upon the wall of my house in Calcutta. There were many mosquitoes about at the time; and I asked myself if this spider fed upon them, and accordingly caught it for the purpose of observation. The source of the mosquitoes was quickly found in the servants' quarters, the brood of larvae appropriated, and by means of a glass funnel over the vessel containing the larvae and pupae, the flies as they emerged were forced to enter a glass fronted box which became a cage for the spider. A small vessel of water was placed in the cage so that the air was constantly moist. The temperature went uncontrolled, and as it was the hot weather ran to maxima above 100° F. The cage was not moved from the room where the spider had been caught. The spider was now supplied with fresh mosquitoes daily and the "kills" counted over 63 days, *i.e.* from May 25th. to July 26th. On July 26th. as I was proceeding on tour, the observations were discontinued, and the spider, a female, weighed: she weighed .075 grammes. The spider put into spirit, was posted to a specialist in spiders, for determination, but the parcel miscarried, and the name of the species is not known.

The spider in the 63 days over which the observations were extended, killed and devoured 355 mosquitoes; but most irregularly. When caught she was hunting; on the next day she laid eggs, and then fasted on and off over a week: for two days after this she fed ravenously, killing 17 on the first of the two and 10 on the second; then followed a fast day, a day when 2 were killed, and another fast day; after this on five days she fed considerably, killing in all 58 mosquitoes; then came a three days complete fast; three days of moderate feeding, a day's fast, and so on. Once in July she fasted completely for seven days. Her maximum was 17; and this she reached on three occasions.

Newly a copy of the *Transactions of the Wisconsin Academy of Sciences, Arts and Letters*, vol. XIX. has come into my hands, wherein at p. 524 is an account by Miss Catherine Elizabeth Nebel of the feeding of seven individuals of the spider, *Aramea sericata*, which she watched for periods up to fifteen weeks, feeding them upon the fruit fly,—*Drosophila ampelophila*. Her spiders fasted and fed as irregularly as mine: but she noted that if the temperature of her laboratory were raised to 100° F. the spiders responded by an increased feeding upon the second day.

It should be noted that these were voluntary fasts, not involuntary which spiders are well known to endure for very long periods.

My spider was never seen to take any notice of a mosquito which did not move. What an advantage rest by day would seem to confer on the mosquito!